## REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed January 6, 2009. Upon entry of the amendments in this response, claims 1, 3 – 39, and 42 remain pending. In particular, Applicants amend claims 1, 3 – 23, 31 – 39, and 42. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

### I. Rejections Under 35 U.S.C. §101

The Office Action indicates that claims 19 – 22 stand rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. Applicants traverse this rejection for at least the reason that claims 19 – 22 are structured to preclude "intangible embodiments" (e.g., by "storing a program"). However, in an effort to advance prosecution, Applicants amend claims 19 – 22 to recite a "computer-readable diskette." As explicitly disclosed in the specification, (e.g., page 15, paragraph [0063]), such embodiments are clearly statutory. Applicants submit that claims 19 – 22, as amended, are allowable.

### II. Rejections Under 35 U.S.C. §112

The Office Action rejects claims 1, 11, 15, 19, and 23 under 35 U.S.C. §112 ¶1 for reciting a "trafficking database," which allegedly is not disclosed in the specification. Applicants submit that use of the term "trafficking" is a clerical error and amend claims 1, 11, 15, 19, and 23, as indicated above. Applicants submit that claims 1, 11, 15, 19, and 23, as amended, meet all the requirement of 35 U.S.C. §112.

Additionally, the Office Action rejects claims 3 – 10, 12 – 14, 16 – 18, and 31 – 39 for alleged lack of antecedent basis. Applicants amend these claims, as indicated above and

submit that claims 3 – 10, 12 – 14, 16 – 18, and 31 – 39 meet all the requirements of 35 U.S.C. §112.

## III.  Rejections Under 35 U.S.C. §103

### A.  Claim 1 is Allowable Over *Bauer* in view of *Midgley* further in view of *Rabbers*

The Office Action indicates that claim 1 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("*Bauer*") in view of U.S. Patent Number 5,870,765 ("*Midgley*") further in view of U.S. Patent Number 7,257,649 ("*Rabbers*"). Applicants respectfully traverse this rejection for at least the reason that *Bauer* in view of *Rabbers* fails to disclose, teach, or suggest all of the elements of claim 1. More specifically, claim 1 recites:

> A data management system comprising:
> a plurality of storage devices individually comprising a physical storage space, wherein the physical storage space of one of the storage devices is configured to store a baseline version of a data object and the physical storage space of an other of the storage devices is configured to store at least one of a plurality of delta versions of the data object *in response to a determination that available storage space on at least one of the storage devices does not currently exist with respect to predefined limits*; and
> processing circuitry configured to control storage operations of at least one of the storage devices to process a restore request with respect to the data object, to access the delta versions from the other of the storage devices responsive to the restore request, wherein accessing the delta versions includes querying a tracking database of a cell manager to obtain data indicating storage locations of the delta versions, and to initiate communication of data of the baseline version and the delta versions of the data object to a computer system, wherein the processing circuitry is further configured to act as a proxy to extract remotely stored delta versions, *wherein restoring the data object includes combining the baseline version of the data object with the remote delta versions of the delta object.*

*(Emphasis added).*

Applicants respectfully submit that claim 1, as amended, is allowable over the cited art

for at least the reason that none of *Bauer*, *Midgley*, and *Rabbers*, taken alone or in

combination, discloses, teaches, or suggests a "data management system, comprising...

physical storage space of an other of the storage devices is configured to store at least one of a

plurality of delta versions of the data object *in response to a determination that available storage*

*space on at least one of the storage devices does not currently exist with respect to predefined*

*limits... wherein restoring the data object includes combining the baseline version of the data*

*object with the remote delta versions of the delta object*" as recited in claim 1, as amended. More

specifically, *Bauer* discloses a "database synchronizer... [that] forms a database synchronization

between a client database and a server database" (column 2, line 5). However, *Bauer* fails to suggest

anything related to utilizing other storage space for delta versions "*in response to a determination*

*that available storage space on at least one of the storage devices does not currently exist with*

*respect to predefined limits*" as recited in claim 1, as amended. Similarly, *Bauer* fails to suggest

anything related to combining more than one delta version with the baseline version to restore the data

object.

Additionally, *Midgley* fails to overcome the deficiencies of *Bauer*. More specifically, *Midgley*

discloses "each table correspondence 60x-1,...,60x-X includes an ordered sequential listing of all the

replicated columns in each of the tables 22x-1,...,22x-X of the local database 22x. Each before-image

log 62x-1,...,62x-X corresponds to the last synchronized values of the replicated columns in respective

tables 22x-1,...,22x-X, of the local database 22x" (column 8, line 13). As illustrated in this passage,

*Midgley* appears to disclose that there is a plurality of different tables, where each of the plurality of

tables includes a single "before-image log." This is different than "*restoring the data object includes*

*combining the baseline version of the data object with the remote delta versions of the delta*

*object*" as recited in claim 1, as amended. Further, *Midgley* fails to suggest "*in response to a*

*determination that available storage space on at least one of the storage devices does not*

currently exist with respect to predefined limits... wherein restoring the data object includes combining the baseline version of the data object with the remote delta versions of the delta object" as also recited in claim 1, as amended.

Further, *Rabbers* fails to overcome the deficiencies of *Midgley* and *Bauer*. More specifically, *Rabbers* discloses a "sync client 401 [that] can request a delta extract from server 116" (column 11, line 50). However, *Rabbers* fails to even suggest "physical storage space of an other of the storage devices is configured to store at least one of a plurality of delta versions of the data object *in response to a determination that available storage space on at least one of the storage devices does not currently exist with respect to predefined limits... wherein restoring the data object includes combining the baseline version of the data object with the remote delta versions of the delta object"* as recited in claim 1, as amended. For at least this reason, claim 1, as amended, is allowable.

## B. Claim 11 is Allowable Over *Bauer* in view of *Midgley* further in view of *Rabbers*

The Office Action indicates that claim 11 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("*Bauer*") in view of U.S. Patent Number 5,870,765 ("*Midgley*") further in view of U.S. Patent Number 7,257,649 ("*Rabbers*"). Applicants respectfully traverse this rejection for at least the reason that *Bauer* in view of *Rabbers* fails to disclose, teach, or suggest all of the elements of claim 11. More specifically, claim 11 recites:

A data management system comprising:

a plurality of storage subsystem means individually comprising physical storage means for storing data corresponding to a plurality of data objects and processing means for controlling storage operations with respect to the respective physical storage means;

database means for tracking storage locations of data of the data objects in corresponding ones of the storage subsystem means;

wherein the processing means of one of the storage subsystem means comprises means for controlling the storage of a baseline version of a data object using the respective physical storage means corresponding to the one of the storage subsystem means and for initiating the storage of a delta version of the data object using an other of the storage subsystem means;

wherein the database means comprises means for storing information regarding the storage location of the delta version using the other of the storage subsystem means; and

wherein the processing means outputs the delta version to the other of the storage subsystem means *after determining that insufficient storage capacity exists at the one of the storage subsystem means to store the delta version*, wherein the processing means is further configured to verify storage of the baseline version of data with a manager means for tracking purposes using the database means, wherein the processing means is further configured to query a tracking database of a cell manager to obtain data indicating storage locations for the delta version.

*(Emphasis added).*

Applicants respectfully submit that claim 11, as amended, is allowable over the cited art for at least the reason that none of *Bauer*, *Midgley*, and *Rabbers*, taken alone or in combination, discloses, teaches, or suggests a "data management system... wherein the processing means outputs the delta version to the other of the storage subsystem means *after determining that insufficient storage capacity exists at the one of the storage subsystem means to store the delta version*" as recited in claim 11, as amended. More specifically, *Bauer* discloses a "database synchronizer... [that] forms a database synchronization between a client database and a server database" (column 2, line 5). However, *Bauer* fails to suggest anything related to a "data management system... wherein the processing means outputs the delta version to the other of the storage subsystem means *after determining that insufficient storage capacity exists at the*

*one of the storage subsystem means to store the delta version*" as recited in claim 11, as amended.

Additionally, *Midgley* fails to overcome the deficiencies of *Bauer*. More specifically, *Midgley* discloses "each table correspondence 60x-1,...,60x-X includes an ordered sequential listing of all the replicated columns in each of the tables 22x-1,...,22x-X of the local database 22x. Each before-image log 62x-1,...,62x-X corresponds to the last synchronized values of the replicated columns in respective tables 22x-1,...,22x-X, of the local database 22x" (column 8, line 13). As illustrated in this passage, *Midgley* appears to disclose that there is a plurality of different tables, where each of the plurality of tables includes a single "before-image log." However, *Midgley* fails to even suggest a "data management system... wherein the processing means outputs the delta version to the other of the storage subsystem means *after determining that insufficient storage capacity exists at the one of the storage subsystem means to store the delta version*" as recited in claim 11, as amended.

Further, *Rabbers* fails to overcome the deficiencies of *Midgley* and *Bauer*. More specifically, *Rabbers* discloses a "sync client 401 [that] can request a delta extract from server 116" (column 11, line 50). However, *Rabbers* fails to even suggest a "data management system... wherein the processing means outputs the delta version to the other of the storage subsystem means *after determining that insufficient storage capacity exists at the one of the storage subsystem means to store the delta version*" as recited in claim 11, as amended. For at least this reason, claim 11, as amended, is allowable.

### C. Claim 15 Is Allowable Over *Bauer* in view of *Midgley* further in view of *Rabbers*

The Office Action indicates that claim 15 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("*Bauer*") in view of U.S. Patent Number 5,870,765 ("*Midgley*") further in view of U.S. Patent Number 7,257,649 ("*Rabbers*"). Applicants respectfully traverse this rejection for at least the reason that *Bauer* in

view of *Rabbers* fails to disclose, teach, or suggest all of the elements of claim 15. More specifically, claim 15 recites:

> A data management system storage device comprising:
> an interface configured to communicate data with respect to other storage devices of a data management system, and to communicate data of a data object with respect to a computer system;
> a physical storage space configured to store a baseline version of the data object at an initial moment in time; and
> processing circuitry configured to receive a request to store a delta version of the data object at a subsequent moment in time after the initial moment in time, to obtain information regarding a capacity of the storage device, and to initiate storage of the delta version of the data object using one of the other storage devices of the data management system responsive to the analysis of the information, ***wherein the processing circuitry outputs the delta version to the one of the other storage devices after determining that insufficient storage capacity exists at the storage devices to store the delta version***, the processing circuitry being further configured to verify storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking the processing circuitry further configured to query a tracking database of the cell manager to obtain data indicating storage locations of the delta version.

***(Emphasis added).***

Applicants respectfully submit that claim 15, as amended, is allowable over the cited art for at least the reason that none of *Bauer*, *Midgley*, and *Rabbers*, taken alone or in combination, discloses, teaches, or suggests a "data management system storage device... ***wherein the processing circuitry outputs the delta version to the one of the other storage devices after determining that insufficient storage capacity exists at the storage devices to store the delta version***" as recited in claim 15, as amended. More specifically, *Bauer* discloses a "database synchronizer... [that] forms a database synchronization between a client database and a server database" (column 2, line 5). However, *Bauer* fails to suggest anything related to a "data management system storage device... ***wherein the processing circuitry outputs the delta version to the one of the other storage devices after determining that insufficient storage capacity exists at the storage devices to store the delta version***" as recited in claim 15, as amended.

Additionally, *Midgley* fails to overcome the deficiencies of *Bauer*. More specifically, *Midgley* discloses "each table correspondence 60x-1,...,60x-X includes an ordered sequential listing of all the replicated columns in each of the tables 22x-1,...,22x-X of the local database 22x. Each before-image log 62x-1,...,62x-X corresponds to the last synchronized values of the replicated columns in respective tables 22x-1,...,22x-X, of the local database 22x" (column 8, line 13). As illustrated in this passage, *Midgley* appears to disclose that there is a plurality of different tables, where each of the plurality of tables includes a single "before-image log." However, *Midgley* fails to even suggest a "data management system storage device... *wherein the processing circuitry outputs the delta version to the one of the other storage devices after determining that insufficient storage capacity exists at the storage devices to store the delta version*" as recited in claim 15, as amended.

Further, *Rabbers* fails to overcome the deficiencies of *Midgley* and *Bauer*. More specifically, *Rabbers* discloses a "sync client 401 [that] can request a delta extract from server 116" (column 11, line 50). However, *Rabbers* fails to even suggest a "data management system storage device... *wherein the processing circuitry outputs the delta version to the one of the other storage devices after determining that insufficient storage capacity exists at the storage devices to store the delta version*" as recited in claim 15, as amended. For at least this reason, claim 15, as amended, is allowable.

### D. Claim 19 is Allowable Over *Bauer* in view of *Midgley* further in view of *Rabbers*

The Office Action indicates that claim 19 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("*Bauer*") in view of U.S. Patent Number 5,870,765 ("*Midgley*") further in view of U.S. Patent Number 7,257,649 ("*Rabbers*"). Applicants respectfully traverse this rejection for at least the reason that *Bauer* in view of *Rabbers* fails to disclose, teach, or suggest all of the elements of claim 19. More specifically, claim 19 recites:

A computer-readable diskette that stores a program that, when executed by a computer, causes processing circuitry of one of a plurality of storage devices of a data management system to:

receive a request to store a baseline version of a data object;

store the baseline version using physical storage space of the one of the storage devices;

receive a request to store a delta version of the data object after effecting storage of the baseline version;

access information regarding a status of the one of the storage devices;

determine that the one of the storage devices has insufficient storage capacity to store the delta version; and

store the delta version using an other of the storage devices of the data management system *after determining that the one of the storage devices has insufficient storage capacity to store the delta version*, the processor-usable tangible medium being further configured to verify storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database, wherein the processing circuitry is further configured to query a tracking database of the cell manager to obtain data indicating storage locations of the stored delta version.

*(Emphasis added).*

Applicants respectfully submit that claim 19, as amended, is allowable over the cited art for at least the reason that none of *Bauer*, *Midgley*, and *Rabbers*, taken alone or in combination, discloses, teaches, or suggests a "computer-readable diskette that stores a program that, when executed by a computer, causes processing circuitry of one of a plurality of storage devices of a data management system to... store the delta version using an other of the storage devices of the data management system *after determining that the one of the storage devices has insufficient storage capacity to store the delta version*" as recited in claim 19, as amended. More specifically, *Bauer* discloses a "database synchronizer... [that] forms a database synchronization between a client database and a server database" (column 2, line 5). However, *Bauer* fails to suggest anything related to a "computer-readable diskette that stores a program that, when executed by a computer, causes processing circuitry of one of a plurality of storage devices of a data management system to... store the delta version using an other of the storage devices of the data management

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system *after determining that the one of the storage devices has insufficient storage capacity to store the delta version*" as recited in claim 19, as amended.

Additionally, *Midgley* fails to overcome the deficiencies of *Bauer*. More specifically, *Midgley* discloses "each table correspondence 60x-1,...,60x-X includes an ordered sequential listing of all the replicated columns in each of the tables 22x-1,...,22x-X of the local database 22x. Each before-image log 62x-1,...,62x-X corresponds to the last synchronized values of the replicated columns in respective tables 22x-1,...,22x-X, of the local database 22x" (column 8, line 13). As illustrated in this passage, *Midgley* appears to disclose that there is a plurality of different tables, where each of the plurality of tables includes a single "before-image log." However, *Midgley* fails to even suggest a "computer-readable diskette that stores a program that, when executed by a computer, causes processing circuitry of one of a plurality of storage devices of a data management system to... store the delta version using an other of the storage devices of the data management system *after determining that the one of the storage devices has insufficient storage capacity to store the delta version*" as recited in claim 19, as amended.

Further, *Rabbers* fails to overcome the deficiencies of *Midgley* and *Bauer*. More specifically, *Rabbers* discloses a "sync client 401 [that] can request a delta extract from server 116" (column 11, line 50). However, *Rabbers* fails to even suggest a "computer-readable diskette that stores a program that, when executed by a computer, causes processing circuitry of one of a plurality of storage devices of a data management system to... store the delta version using an other of the storage devices of the data management system *after determining that the one of the storage devices has insufficient storage capacity to store the delta version*" as recited in claim 19, as amended. For at least this reason, claim 19, as amended, is allowable.

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**E. Claim 23 is Allowable Over _Bauer_ in view of _Midgley_ further in view of _Rabbers_**

The Office Action indicates that claim 23 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("_Bauer_") in view of U.S. Patent Number 5,870,765 ("_Midgley_") further in view of U.S. Patent Number 7,257,649 ("_Rabbers_"). Applicants respectfully traverse this rejection for at least the reason that _Bauer_ in view of _Rabbers_ fails to disclose, teach, or suggest all of the elements of claim 23. More specifically, claim 23 recites:

> A data management method comprising:
> receiving a baseline version of a data object of a computer system using one of a plurality of storage devices of a data management system;
> storing the baseline version using the one of the storage devices after the reception of the baseline version:
> receiving a request using the one of the storage devices, wherein the request comprises a request to store a delta version of the baseline version; analyzing a capacity of the one of the storage devices; determining, that the one of the storage devices has insufficient storage capacity to store the delta version; and
> storing the delta version using an other of the storage devices **_after determining that the one of the storage devices has insufficient storage capacity to store the delta version_**;
> verifying storage of the baseline version of the data object with a cell manager for tracking purposes using a tracking database; and
> processing a restore request, wherein processing the restore request includes querying a tracking database of the cell manager to obtain data indicating storage locations of the delta version.

**_(Emphasis added)._**

Applicants respectfully submit that claim 23, as amended, is allowable over the cited art for at least the reason that neither _Bauer_ nor _Rabbers_, taken alone or in combination, discloses, teaches, or suggests a "data management method comprising... storing the delta version using an other of the storage devices **_after determining that the one of the storage devices has insufficient storage capacity to store the delta version_**" as recited in claim 23, as amended. More specifically, _Bauer_ discloses a "database synchronizer... [that] forms a database synchronization between a client

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database and a server database" (column 2, line 5). However, *Bauer* fails to suggest a "data management method comprising... storing the delta version using an other of the storage devices *after determining that the one of the storage devices has insufficient storage capacity to store the delta version*" as recited in claim 23, as amended.

Further, *Rabbers* fails to overcome the deficiencies of *Bauer*. More specifically, *Rabbers* discloses a "sync client 401 [that] can request a delta extract from server 116" (column 11, line 50). However, *Rabbers* fails to even suggest a "data management method comprising... storing the delta version using an other of the storage devices *after determining that the one of the storage devices has insufficient storage capacity to store the delta version*" as recited in claim 23, as amended. For at least this reason, claim 23, as amended, is allowable.

F.    Claims 3 – 10, 12 – 14, 16 – 18, 20 – 22, and 24 – 39 are Allowable Over
       *Bauer* in view of *Midgley* further in view of *Rabbers*

The Office Action indicates that claims 3 – 10, 12 – 14, 16 – 18, 20 – 22, and 24 – 39 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Number 5,870,765 ("*Bauer*") in view of U.S. Patent Number 5,870,765 ("*Midgley*") further in view of U.S. Patent Number 7,257,649 ("*Rabbers*"). Applicants respectfully traverse this rejection for at least the reason that *Bauer* in view of *Rabbers* fails to disclose, teach, or suggest all of the elements of claims 3 – 10, 12 – 14, 16 – 18, 20 – 22, and 24 – 39. More specifically, dependent claims 3 – 10 and 31 – 35 are believed to be allowable for at least the reason that these claims depend from and include the elements of allowable independent claim 1. Dependent claims 12 – 14 are believed to be allowable for at least the reason that they depend from and include the elements of allowable independent claim 11. Dependent claims 16 – 18 and 36 are believed to be allowable for at least the reason that they depend from and include the elements of allowable independent claim 15. Dependent claims 20 – 22 and 37 – 39 are believed to be allowable for at least the reason that they depend from and include the

elements of allowable independent claim 19. Dependent claims 24 – 30 are believed to be allowable for at least the reason that they depend from and include the elements of allowable independent claim 23. *In re Fine, Minnesota Mining and Mfg.Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

## CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested.

Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and Official Notice, or statements interpreted similarly, should not be considered well-known for the particular and specific reasons that the claimed combinations are too complex to support such conclusions and because the Office Action does not include specific findings predicated on sound technical and scientific reasoning to support such conclusions.

If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

_____/afb/_____.
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